

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2001-255426

(43)Date of publication of application : 21.09.2001

(51)Int.Cl. G02B 6/122
G02B 6/13

(21)Application number : 2000-063183 (71)Applicant : NIPPON TELEGR & TELEPH
CORP <NTT>

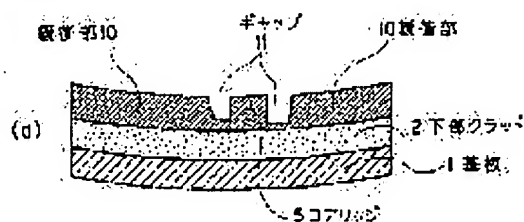
(22)Date of filing : 08.03.2000 (72)Inventor : KATO YUJIRO
TOMARU AKIRA
HIKITA MAKOTO
ENBUTSU KOUJI
MARUNO TORU
HAYASHIDA SHOICHI
KURIHARA TAKASHI

(54) OPTICAL WAVEGUIDE

(57)Abstract:

PROBLEM TO BE SOLVED: To prevent generation of cracks due to mismatching of hardening and shrinking between a polymer optical material and a substrate in an optical waveguide using a polymer optical material.

SOLUTION: A first polymer optical film to be used as a lower clad 2 is formed on a substrate 1, and a second polymer optical film is formed on the first polymer optical film. Gaps 11 are formed by etching or the like in the second polymer optical film and the residual part is used as a core ridge 5 and a buffer 10. With the presence of the buffer 10, release of the compressive stress in the substrate 1 is suppressed to the minimum to prevent decrease in the warpage of the substrate 1, and therefore, to prevent generation of cracks. Further a third polymer optical film to be used as an upper clad 6 is formed on the core ridge 5 and the buffer 10 to manufacture the optical waveguide. The gap 11 is formed to have the minimum width



which can prevent leaking of light from the core ridge 5 to the buffer 10.

LEGAL STATUS

[Date of request for examination] 10.10.2001

[Date of sending the examiner's decision of rejection] 16.12.2003

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]